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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte VLADIMIR PEKAR and DANIEL BYSTROV

Appeal 2016-004734
Application 12/671,519
Technology Center 3600

Before JOSEPH L. DIXON, ST. JOHN COURTENAY III, and
SCOTT B. HOWARD, *Administrative Patent Judges*.

COURTENAY, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

This is an appeal under 35 U.S.C. § 134(a) from the Examiner’s Final Rejection of claims 1–10. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

The Invention

The disclosed and claimed invention on appeal “relates to the field of image registration and more specifically to registration of atlas images with clinical images.” (Spec. 1).

Independent Claim 1

1. A non-transitory computer-readable storage medium storing a set of instructions executable by a processor, the set of instructions, when executed by the processor, causing the processor to perform operations comprising:

generating a candidate transformation for transforming a first region of an atlas image from an atlas of multidimensional images;

transforming the first region of the atlas image using the candidate transformation;

computing a measure of similarity of the transformed first region of the atlas image and a corresponding first region of an objective image;

evaluating the candidate transformation using a criterion based on the computed measure of similarity and determining an optimal transformation based on the evaluation of the candidate transformation;

extending the optimal transformation of the first region of the atlas image to a second region of the atlas image to create a registration transformation, wherein the optimal transformation is applied to the first region and the second region, the second region comprising the first region; and

transforming the second region using the registration transformation, thereby registering the atlas image with the objective image.

Rejections

- A. Claims 1–10 are rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter.

- B. Claims 1–10 are rejected under pre-AIA 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement.
- C. Claims 1–10 are rejected under pre-AIA 35 U.S.C. § 112, second paragraph, as being indefinite.

ANALYSIS

We have considered all of Appellants’ arguments and any evidence presented. Regarding rejections A and B, we disagree with Appellants’ arguments and we adopt as our own: (1) the findings and legal conclusions set forth by the Examiner in the Final Office Action (2–8), from which this appeal is taken, and (2), the corresponding findings, legal conclusions, and explanations for rejections A and B, as set forth in the Answer (2–10), in response to Appellants’ arguments. (App. Br. 5–20). However, we reverse rejection C under § 112, section paragraph, for the reasons discussed *infra*. We highlight and address specific findings and arguments for emphasis in our analysis below.

Rejection under § 101 of Claims 1–10

Issue 1: Under § 101, did the Examiner err in concluding that claims 1–10 are directed to non-statutory subject matter?¹

¹ We give the contested claim limitations the broadest reasonable interpretation consistent with the Specification. *See In re Morris*, 127 F.3d 1048, 1054 (Fed. Cir. 1997). *Cf. Spec. 12, ll. 25–27*: “It should be noted that the above-mentioned embodiments **illustrate rather than limit the invention** and that those skilled in the art will be able to design alternative embodiments without departing from the scope of the appended claims.” (emphasis added).

Under 35 U.S.C. § 101, an invention is patent-eligible if it claims a “new and useful process, machine, manufacture, or composition of matter.” The Supreme Court, however, has long interpreted § 101 to include an implicit exception: “[l]aws of nature, natural phenomena, and abstract ideas are not patentable.” *See, e.g., Alice Corp. Pty. Ltd. v. CLS Bank Int’l*, 134 S. Ct. 2347, 2354 (2014) (quoting *Assoc. for Molecular Pathology v. Myriad Genetics, Inc.*, 133 S. Ct. 2107, 2116 (2013) (internal quotation marks omitted)). In *Alice*, the Supreme Court set forth an analytical “framework for distinguishing patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts.” *Id.* at 2355 (citing *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 132 S. Ct. 1289, 1296–97 (2012)).

Here, regarding the judicially created “abstract idea” exception, Appellants contend:

Claim 1 is directed towards registering an objective image with an atlas image, which does not require an explicit landmark setting. **Such an action does not describe an abstract concept or a concept similar to those found by the court to be abstract**, such as a fundamental economic practice, a method of organizing human activity, an idea itself (standing alone), or a mathematical relationship. (*See* USPTO Abstract Idea Examples, p. 3). In contrast, claim 1 is directed towards a method of automatically transforming a first region of an atlas image and extending a determined optimal transformation of the first region to a second region. This addresses **an efficiency issue** that is particular to the field of image registration. (*See* Specification, p. 1, 11. 1-18).

...

Advantageously, the claimed subject matter does not require setting landmark positions in the objective image. **A further**

advantage of the system is that since the similarity measure is computed locally, i.e., in the first region of the atlas image, **the registration is fast** and thus attractive for clinical use. (*See* Specification, p.2 ll. 20-23). The claimed subject matter further differs from other claims found by the courts to recite abstract ideas in that it does not merely recite the performance of some business practice or mathematical relationship known to the world but is, rather, rooted in technology used to overcome a problem specifically arising in the clinical realm. Accordingly, the steps of claim 1 **do not recite an abstract idea**, nor do they implicate any other judicial exception.

(App. Br. 7–8) (emphases added).

***Alice* — Step One**

The first step in our analysis is to determine whether the claims at issue are directed to a patent-ineligible concept, such as an **abstract idea**. *See Alice*, 134 S. Ct. at 2355.

If the claims are directed to a patent-ineligible concept, the second step in the analysis is to “consider the elements of each claim both individually and ‘as an ordered combination’ to determine whether [there are] additional elements that ‘transform the nature of the claim’ into a patent-eligible application.” *Id.* (quoting *Mayo*, 132 S. Ct. at 1298, 1297).

In other words, the second step is to “search for an ‘inventive concept’—*i.e.*, an element or combination of elements that is ‘sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the [ineligible concept] itself.’” *Id.* (brackets in original) (quoting *Mayo*, 132 S. Ct. at 1294).

Turning to the first *Alice* step in our analysis, we have reviewed all of Appellants’ arguments and find them unpersuasive. (App. Br. 5–11; Reply Br. 1–5). We conclude each of the claims before us on appeal merely

implements clinical medical image analysis and evaluation steps, including mathematical transformations, in a manner similar to steps typically performed by medical imaging technicians, physicians, or other trained medical personnel, **using a generic computer**.

Regarding the claimed steps or functions performed by a **computer**, we note the Supreme Court in *Alice* cautions that merely limiting the use of an abstract idea “to a particular technological environment” or implementing the abstract idea on a “wholly generic computer” is not sufficient as an additional feature to provide “practical assurance that the process is more than a drafting effort designed to monopolize the [abstract idea] itself.” *Alice*, 134 S. Ct. at 2358 (internal quotation marks and citations omitted).

Here, we conclude each of Appellants’ claims on appeal is distinguishable from the type of claim considered by the court in *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327 (Fed. Cir. 2016). We conclude none of Appellants’ claims is “directed to an **improvement** in the functioning of a computer,” as was found by the court regarding the subject claim in *Enfish*, 822 F.3d at 1338 (emphasis added).

Nevertheless, Appellants urge: “A further advantage of the system is that since the similarity measure is computed locally, i.e., in the first region of the atlas image, the **registration is fast** and thus **attractive for clinical use**. (See Specification, p.2 ll. 20-23).” (App. Br. 8) (emphasis added).

To the extent that the recited steps or acts (or functions) may be performed **faster or more efficiently** using a computer, our reviewing court provides applicable guidance:

While the claimed system and method certainly purport to accelerate the process of analyzing audit log data, **the speed increase comes from the capabilities of a general-purpose**

computer, rather than the patented method itself. See *Bancorp Servs., L.L.C. v. Sun Life Assurance Co. of Can.* (U.S.), 687 F.3d 1266, 1278 (Fed. Cir. 2012) (“[T]he fact that the required calculations could be performed **more efficiently** via a computer does not materially alter the patent eligibility of the claimed subject matter.”).

FairWarning IP, LLC v. Iatric Sys., Inc., 839 F.3d 1089, 1095 (Fed. Cir. 2016) (emphases added).

Applying this reasoning to Appellants’ claims on appeal, we similarly find any purported faster or more efficient performance of the claimed steps or acts (or functions) **merely comes from the capabilities of a general-purpose computer**, rather than from Appellants’ claimed steps or functions.

Therefore, we agree with the Examiner’s legal conclusion and finding:

The claim(s) is/are directed to the abstract idea of an idea of itself. The additional element(s) or combination of elements in the claim(s) other than the abstract idea per se amount(s) to no more than: [] recitation of generic computer structure that serves to perform generic computer functions that are well-understood, routine, and conventional activities previously known to the pertinent industry.

(Final Act. 2–3) (emphasis added).

We find the claims considered by the Court in *Electric Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350 (Fed. Cir. 2016) are analogous to Appellants’ claims, to the extent that Appellants’ claims similarly collect information, analyze it in some fashion, and present or communicate the result. The Court in *Electric Power* guides: “we have treated analyzing information by steps people go through in their minds, or by mathematical algorithms, without more, as essentially mental processes within the abstract-idea category.” 830 F.3d at 1354 (internal citations omitted).

For at least these reasons, we conclude all claims 1–10 on appeal **are directed to an abstract idea.** (*Alice* — Step One).

***Alice* — Step Two**

Proceeding to step two of the *Alice* test articulated by the Supreme Court, we further “consider the elements of each claim both individually and ‘as an ordered combination’ to determine whether the additional elements ‘transform the nature of the claim’ into a patent-eligible application.” *Alice*, 134 S. Ct. at 2355 (quoting *Mayo*, 132 S. Ct. at 1298, 1297).

Regarding step two of the *Alice* analysis, Appellants contend, *inter alia*:

All currently known deformable registration methods have certain limitations. (*See* Specification, p.1 ll. 8-9). Standard landmark-based registration techniques require explicit one-to-one landmark correspondences in the registered images. (*See* Specification, p.1 ll. 12-13). **When done manually the setting of landmarks is a difficult and tedious process**, especially in three-dimensional (3-D) data. (*See* Specification, p.1 ll. 13-14). **When done automatically** the setting methods are mostly application-specific and their design **usually requires a considerable effort.** (*See* Specification, p.1 ll. 15-16). **Alternatively, intensity-based deformable registration methods require strong assumptions**, which are often violated, about intensity variance in the images being registered. (*See* Specification, p.1 ll. 16-18). Advantageously, the claimed subject matter does not require setting landmark positions in the objective image. A further advantage of the system is that since the similarity measure is computed locally, i.e., in the first region of the atlas image, **the registration is fast and thus attractive for clinical use.** (*See* Specification, p.2 ll. 20-23). The claims at issue provide a solution to problems that currently exist with manual and automatic deformable registration and solve this technological problem that occurs in conventional industry practice by “generating a candidate transformation ...

transforming the first region of the atlas image ... computing a measure of similarity ... evaluating the candidate transformation ... determining an optimal transformation based on the evaluation of the candidate transformation ... extending the optimal transformation of the first region of the atlas image to a second region of the atlas image to create a registration transformation ... and transforming the second region using the registration transformation, thereby registering the atlas image with the objective image.”

(App. Br. 13–14) (emphases added).

However, we conclude the *nature* of claims 1–10 is not *transformed* into a patent-eligible application of the abstract idea presented, because these claims do nothing more than simply instruct the practitioner to implement an abstract idea using a generic computer. Regarding step two of the *Alice* test, we find nothing in Appellants’ claims 1–10 that adds anything “significantly more” to transform the abstract concepts of *generating, transforming a first region, computing a measure of similarity, evaluating, extending, and transforming the second region*, into a patent-eligible application. See *Alice*, 134 S. Ct. at 2357.

Because we find all claims on appeal merely use a generic computer or processor as a **tool** which is used in the way a computer normally functions, we conclude claims 1–10 fail to impart any discernible improvement upon the computer or processor, nor do Appellants’ claims solve “a challenge particular to the Internet” as considered by the court in *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245, 1256–7 (Fed. Cir. 2014).

Appellants do not argue that each of the steps or functions recited in claims 1–10 is individually inventive. None of Appellants’ arguments persuasively show that some **inventive concept** arises from the **ordered**

combination of these steps or functions, which, even if true, would be unpersuasive given that we conclude Appellants’ claims are directed to ordinary steps (or functions) in data analysis, and are recited in the ordinary order, i.e., following a general pattern of collecting, analyzing, and communicating the results of the analyzed information. *See Elec. Power*, 830 F.3d at 1355.

The “machine-or-transformation” (MoT) test

As recognized by the Federal Circuit in *Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709, 715–16 (Fed. Cir. 2014), the “machine-or-transformation” (MoT) test, as outlined in *In re Bilski*, 545 F.3d 943, 954 (Fed. Cir. 2008), can provide a “useful clue” in the second step of the *Alice* framework. Under *Bilski*’s MoT test, a claimed process is patent-eligible under § 101 if:

- (1) it is tied to a particular machine or apparatus; or
- (2) the process transforms a particular article into a different state or thing. *Bilski*, 545 F.3d at 954 (citing *Gottschalk v. Benson*, 409 U.S. 63, 70 (1972)).

Contrary to Appellants’ arguments (App. Br. 5–15), we conclude Appellants’ “non-transitory computer-readable storage medium” (claim 1), “image acquisition apparatus comprising: a processor configured to generate a candidate transformation for transforming a first region of the atlas” (claim 7), “workstation comprising: a memory storing a set of instructions” (claim 8), “method of registering an atlas image from an atlas of multidimensional images with an objective image” (claim 9), and “computer program product to be loaded by a computer arrangement, comprising instructions for registering an atlas image from an atlas of multidimensional images with an

objective image” (claim10), are neither sufficiently **tied to a particular machine or apparatus**, nor involved in any type of **transformation of any particular article**.²

In contrast to *DDR Holdings* and *Enfish*, in which the Federal Circuit held that claims directed to specific improvements in Internet or computer capabilities are patent-eligible subject matter, Appellants’ claims are not directed to improving any type of computer capabilities, such as with *Enfish*’s “self-referential table for a computer database.” *Enfish*, 822 F.3d at 1336.

Instead, we conclude Appellants’ claims are broadly directed to abstract general concepts of collecting, analyzing, and communicating the results of the analyzed information in the context of processing medical images. *See Elec. Power*, 830 F.3d at 1355. “[M]erely selecting information, by content or source, for collection [and] analysis . . . does nothing significant to differentiate a process from ordinary mental processes” (*Id.*).

Applying this reasoning here, we find receiving atlas data and analyzing (i.e., “transforming” data), by itself, does not transform an otherwise-abstract process or system of information collection and analysis.

² *See Accenture Global Servs., GmbH v. Guidewire Software, Inc.*, 728 F.3d 1336, 1344–45 (Fed. Cir. 2013) (claims reciting “generalized software components arranged to implement an abstract concept [of generating insurance-policy-related tasks based on rules to be completed upon the occurrence of an event] on a computer” not patent eligible); *Dealertrack, Inc. v. Huber*, 674 F.3d 1315, 1333–34 (Fed. Cir. 2012) (“[s]imply adding a ‘computer aided’ limitation to a claim covering an abstract concept, without more, is insufficient to render [a] claim patent eligible” (internal citation omitted)).

See id. Like the claims at issue in *Electric Power*, we find Appellants’ claims 1–10 “do not invoke any assertedly inventive programming” or require an “arguably inventive set of components or methods.” *Id.*

Here, we find the invocations of conventional, off-the-shelf computer components (e.g., claim 8: “A workstation comprising: a memory . . . a processor”) are insufficient to pass as an inventive set of components. As such, our review of the claims, fully considering each claim’s elements (both individually and as an ordered combination), fails to show that the nature of any of Appellants’ claims 1–10 is transformed into patent-eligible subject matter.

However, Appellants further urge: “Given the particularities of the way in which each operation is performed, independent claim 1 cannot and does not **preempt** the making, using, and selling of basic tools of scientific and technological work.” (App. Br. 14).

However, for the reasons discussed *infra* regarding rejection B (under § 112, written description), we agree with the Examiner (Final Act. 3) that the functional language recited in Appellants’ claims 1–10 is unsupported by sufficient corresponding **algorithms** described in the Specification, as required under the guidance of MPEP 2161.01(I). Therefore, we conclude claims 1–10 are essentially directed to **pure functional claiming**, untethered to any **particular** machine, which raises concerns regarding **preemption** (i.e., by broadly covering *all possible structures or means* for performing the recited functions, including present and future means unknown to the inventors and not described in Appellants’ Specification).

Although the extent of preemption is a consideration, the absence of complete preemption is not dispositive. *See, e.g., Ariosa Diagnostics, Inc. v.*

Sequenom, Inc., 788 F.3d 1371, 1379 (Fed. Cir. 2015) (“While preemption may signal patent ineligible subject matter, the absence of complete preemption does not demonstrate patent eligibility.”); *Ultramercial Inc. v. Hulu LLC*, 722 F.3d 1335, 1346 (Fed. Cir. 2013) (“[T]he Supreme Court has stated that, even if a claim does not wholly pre-empt an abstract idea, it still will not be limited meaningfully if it contains only insignificant or token pre- or post-solution activity—such as identifying a relevant audience, a category of use, field of use, or technological environment.”) (citations omitted), *vacated and remanded*, *WildTangent, Inv. v. Ultramercial LLC*, 134 S. Ct. 2870 (2014) (remanding for consideration in light of *Alice*, 134 S. Ct. 2347).

Applying this reasoning here, we conclude each of Appellants’ claims 1–10 is directed to a patent-ineligible abstract concept, and does not recite something “significantly more” under the second step of the *Alice* analysis. Accordingly, for the reasons discussed above, we sustain the Examiner’s rejection A under 35 U.S.C. § 101 of claims 1–10, as being directed to non-statutory subject matter in light of *Alice* and its progeny.

Rejection under § 112, first paragraph of Claims 1–10

Issue 2: Under pre-AIA § 112, first paragraph, did the Examiner err in finding that claims 1–10 fail to comply with the written description requirement?

The Examiner finds the following functional language recited in each of the independent claims, in similar or commensurate form, is not supported with an algorithm, in accordance with the guidance of MPEP § 2161.01(I):

- generating a candidate transformation
- transforming the first region
- computing a measure of similarity
- determining an optimal transformation
- extending the optimal transformation
- transforming the second region

(Final Act. 4–8).³

The Examiner specifically finds: “**Applicant has not disclosed the respective algorithms** for the five claimed steps. The dependent claims are rejected for the same reasons.” (Final Act. 9) (emphasis added).

³ See MPEP § 2161.01(I), in pertinent part:

When examining computer-implemented functional claims, examiners should determine whether the specification discloses the computer and the algorithm (e.g., the necessary steps and/or flowcharts) that perform the claimed function in sufficient detail such that one of ordinary skill in the art can reasonably conclude that the inventor invented the claimed subject matter. Specifically, if one skilled in the art would know how to program the disclosed computer to perform the necessary steps described in the specification to achieve the claimed function and the inventor was in possession of that knowledge, the written description requirement would be satisfied. *Id.* If the specification does not provide a disclosure of the computer and algorithm in sufficient detail to demonstrate to one of ordinary skill [in] the art that the inventor possessed the invention including how to program the disclosed computer to perform the claimed function, a rejection under 35 U.S.C. 112(a) or pre-AIA 35 U.S.C. 112, first paragraph, for lack of written description must be made.

Regarding the support for the claimed *transformations*, Appellants point to the Specification (9, ll. 1–11), which includes a citation to a **non-patent publication** (*Lorenz*):

Using principal component analysis to describe the variability of landmark positions is described, **for example, in the article** “Generation of point-based 3D statistical shape models for anatomical objects” by Cristian **Lorenz** and Nils Krahnstöver, in *Computer Vision and Image Understanding* 77(2), 2000, pages 175-191.” (*See* Specification, p. 9, ll. 1-11). The complete paragraph is disclosed above and as stated by the Examiner the complete paragraph discloses the location of the written description. As such, Appellants submit that a person skilled in the art “**would know how to program ... [a] computer**” to **generate various transformations**, including but not limited to, rigid, affine, piece-wise affine and elastic transformations. (*See* Specification, p. 8, ll. 30-33).

(App. Br. 17) (emphases added).

As pointed out by the Examiner (Final Act. 10–11) regarding the cited *Lorenz et al.* article (App. Br. 17; Spec. 9, l. 10) (and also regarding the cited “*Bookstein*” article — Spec. 8, l. 24), 37 C.F.R. § 1.57(b)(4)(d) guides that “[e]ssential material’ may be incorporated by reference, but only by way of an incorporation by reference to a U.S. patent or U.S. patent application publication, which patent or patent application publication does not itself incorporate such essential material by reference.” Essential material is material that is necessary to, *inter alia*, provide a written description of the claimed invention. (*Id.*)

Our reviewing court further guides the written description “must clearly allow persons of ordinary skill in the art to recognize that [the inventor] invented what is claimed.” *Ariad Pharms., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010) (en banc) (citation and quotations

omitted). The test is whether the disclosure “conveys to those skilled in the art that the inventor had possession of the claimed subject matter as of the filing date.” *Id.* “[A]ctual ‘possession’ or reduction to practice outside of the specification is not enough. Rather, . . . it is the specification itself that must demonstrate possession.” *Id.* at 1352; *see also PowerOasis, Inc. v. T-Mobile USA, Inc.*, 522 F.3d 1299, 1306–07 (Fed. Cir. 2008) (explaining that § 112, ¶ 1 “requires that the written description *actually* or *inherently* disclose the claim element”).

[I]t is ‘not a question of whether one skilled in the art *might* be able to construct the patentee’s device from the teachings of the disclosure. . . . Rather, it is a question whether the application *necessarily discloses* that particular device.’ . . . A description which renders obvious the invention for which an earlier filing date is sought is not sufficient.

Lockwood v. Am. Airlines, Inc., 107 F.3d 1565, 1572 (Fed. Cir. 1997) (quoting *Jepson v. Coleman*, 314 F.2d 533, 536 (CCPA 1963)) (emphasis added).

This reasoning is applicable here. In reviewing the record, we agree with the Examiner that the citation to *Lorenz et al.* and the citations to other non-patent references in the Specification are each directed to **essential material** (outside of the original Specification), that is insufficient to demonstrate possession of Appellants’ claimed invention. “[A]ctual ‘possession’ or reduction to practice **outside of the specification** is not enough. Rather, . . . **it is the specification itself that must demonstrate possession.**” *Ariad* at 598 F.3d at 1352. (emphasis added).

Because Appellants fail to direct our attention to sufficient disclosure (i.e., specific supporting algorithms) in the original Specification that demonstrates possession of the elements contested by the Examiner, we find

Appellants' contentions do not persuasively rebut the Examiner's findings. (Final Act. 3–9). Therefore, for the reasons discussed above, we are not persuaded the Examiner erred. Accordingly, we sustain the Examiner's rejection B of claims 1–10, under pre-AIA 35 U.S.C. § 112, first paragraph, for failing to comply with the written description requirement.

Rejection under § 112, second paragraph of Claims 1–10

Issue 3: Under pre-AIA § 112, second paragraph, did the Examiner err in concluding that claims 1–10 are indefinite?

In the Final Action (9), the Examiner sets forth the basis for the rejection, under pre-AIA § 112, second paragraph:

Within claims 1, 7, 8, 9, and 10, the Applicant has **amended the claims to include “extending, the optimal transformation** of the first region of the atlas to a second region of the atlas image.” However, the Applicant has not included any claimed, or disclosed, instructions on the particular way that the optimal transformation should be extended. **The claim is indefinite because the process of “extending” is missing.**

(emphasis added).

Appellants urge, *inter alia*: “As discussed previously regarding the 35 U.S.C. § 112, first paragraph rejection, **the process of extending is well known in the art and is cited to in Bookstein**. Accordingly, the withdrawal of the 35 U.S.C. 112, second paragraph, rejection[] is respectfully requested.” (App. Br. 21) (emphasis added).

MPEP § 2174 guides:

if a claim is amended to include an invention that is not described in the application as filed, a rejection of that claim under 35 U.S.C. 112(a) or pre-AIA 35 U.S.C. 112, first paragraph, as

being directed to subject matter that is not described in the specification as filed may be appropriate.

However, we find original (unamended) claim 1 recites “an **extension unit** (140) for **extending the optimal transformation** of the first region of the atlas image to a second region of the atlas image” (emphasis added). Therefore, we do not understand the Examiner’s rationale for the rejection. MPEP § 2174 provides further guidance:

The requirements of 35 U.S.C. 112(a) and (b) or the first and second paragraphs of pre-AIA 35 U.S.C. 112 are separate and distinct. If a description or the enabling disclosure of a specification is not commensurate in scope with the subject matter encompassed by a claim, **that fact alone does not render the claim imprecise or indefinite** or otherwise not in compliance with 35 U.S.C. 112(b) or pre-AIA 35 U.S.C. 112, second paragraph; rather, the claim is based on an insufficient disclosure (35 U.S.C. 112(a) or pre-AIA 35 U.S.C. 112, first paragraph) and should be rejected on that ground. *In reBorkowski*, 422 F.2d 904, 164 USPQ 642 (CCPA 1970).

(emphasis added)

In the Answer (12), regarding rejection C under §112, second paragraph, the Examiner briefly responds to Appellants’ contentions without providing any further explanation: “The Examiner appreciates that the Applicant describ[es] the Bookstein features as ‘commonly known and used.’ Therefore, the **Objection to the Specification has been removed.**” (emphasis added).

We emphasize that regardless of any objection made and withdrawn by the Examiner (Ans. 12), there is **no express indication in the record** that the Examiner has withdrawn rejection C under §112, second paragraph, over claims 1–10. *See* 37 C.F.R. 41.39(a)(1) (“An examiner's answer is deemed to incorporate all of the grounds of rejection set forth in the Office action

from which the appeal is taken (as modified by any advisory action and pre-appeal brief conference decision), **unless the examiner's answer expressly indicates that a ground of rejection has been withdrawn.**") (emphasis added). We note the Advisory Action, mailed August 20, 2015, provides no further clarification or explanation. Therefore, rejection C remains before us on appeal. *See* 37 C.F.R. 41.39(a)(1).

Because the Examiner's rejection C appears to be misplaced under 35 U.S.C. § 112, second paragraph, and not in accordance with the guidance of MPEP § 2174, we reverse rejection C of claims 1–10.

Reply Brief

To the extent Appellants may advance new arguments in the Reply Brief not in response to a shift in the Examiner's position in the Answer, we note arguments raised in a Reply Brief that were not raised in the Appeal Brief or are not responsive to arguments raised in the Examiner's Answer will not be considered except for good cause. *See* 37 C.F.R. § 41.41(b)(2).

DECISION

We affirm the Examiner's decision rejecting claims 1–10 under 35 U.S.C. § 101.

We affirm the Examiner's decision rejecting claims 1–10 under pre-AIA 35 U.S.C. § 112, first paragraph (written description).

We reverse the Examiner's decision rejecting claims 1–10 under pre-AIA 35 U.S.C. § 112, second paragraph.

Because we have affirmed at least one ground of rejection with respect to each claim on appeal, the Examiner's decision is affirmed. *See* 37 C.F.R. § 41.50(a)(1).

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 41.50(f).

AFFIRMED